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WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY
(PCT Rule 43bis.1)

Date of mailing
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference
see form PCT/ISA/220

FOR FURTHER ACTION
See paragraph 2 below

International application No.
PCT/IB2004/050563

International filing date (day/month/year)
03.05.2004

Priority date (day/month/year)
06.05.2003

International Patent Classification (IPC) or both national classification and IPC
G02B3/14, G02B26/02

Applicant
KONINKLIJKE PHILIPS ELECTRONICS N.V.

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☒ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☒ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA"). However, this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of three months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA:



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Box No. I Basis of the opinion

1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
☐ This opinion has been established on the basis of a translation from the original language into the following language , which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material:
☐ a sequence listing
☐ table(s) related to the sequence listing
 - b. format of material:
☐ in written format
☐ in computer readable form
 - c. time of filing/furnishing:
☐ contained in the international application as filed.
☐ filed together with the international application in computer readable form.
☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

Box No. II Priority

1. ☒ The following document has not been furnished:

☒ copy of the earlier application whose priority has been claimed (Rule 43*bis*.1 and 66.7(a)).

☐ translation of the earlier application whose priority has been claimed (Rule 43*bis*.1 and 66.7(b)).

Consequently it has not been possible to consider the validity of the priority claim. This opinion has nevertheless been established on the assumption that the relevant date is the claimed priority date.

2. ☐ This opinion has been established as if no priority had been claimed due to the fact that the priority claim has been found invalid (Rules 43*bis*.1 and 64.1). Thus for the purposes of this opinion, the international filing date indicated above is considered to be the relevant date.

3. Additional observations, if necessary:

Box No. V Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	6-10
	No: Claims	1-5,11-15
Inventive step (IS)	Yes: Claims	
	No: Claims	1-15
Industrial applicability (IA)	Yes: Claims	1-15
	No: Claims	

2. Citations and explanations

see separate sheet

Box No. VI Certain documents cited

1. Certain published documents (Rules 43*bis*.1 and 70.10)

and / or

2. Non-written disclosures (Rules 43*bis*.1 and 70.9)

see form 210

Re Item V.

Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1 The following documents are referred to in this communication:

- D1: US-B-6 369 9541 (BERGE BRUNO ET AL) 9 April 2002 (2002-04-09)
- D2: WO 02/099527 A (PRINS MENNO W J ; CORNELISSEN HUGO J (NL); KONINKL PHILIPS ELECTRONICS) 12 December 2002 (2002-12-12)
- D3: EP-A-1 069 450 (CANON KK) 17 January 2001 (2001-01-17)
- D4: BERGE B ET AL: "Variable focal lens controlled by an external voltage: an application of electrowetting" EUROPEAN PHYSICAL JOURNAL E. SOFT MATTER, EDP SCIENCES, IT, vol. 3, no. 2, October 2000 (2000-10), pages 159-163, XP002285977 ISSN: 1292-8941
- D5: WO 03/069380 A (SNOEREN RUDOLPH M ; KUIPER STEIN (NL); FEENSTRA BOKKE J (NL); HENDRIKS) 21 August 2003 (2003-08-21)

2 ARTICLE 6 PCT

The application does not meet the requirements of Article 6 PCT for the following reasons:

The expression "...at least one of the fluids comprises a compound having a zero dipole moment in the gaseous phase" renders claim 1 unclear. It remains vague and unclear what the phase of the respective compound is in the electrowetting module and what compounds reference is made of.

In claim 11 it is unclear what is meant with the expression "...refractive index difference increasing effect".

3 INDEPENDENT CLAIM 1

- 3.1 The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claim 1 is not new in the sense of Article 33(2) PCT.
Document D1 discloses (the references in parenthesis applying to this document):

An electrowetting module comprising a cavity (cf. Fig. 1, 6) containing at least a first body of a first fluid (13) and a second body of a second fluid (11), the two bodies being separated by an interface, and means (16, 75, 76, 77, 78, 79) for exerting a force on at least one of the bodies to change the position and/or shape of the interface, characterised in that at least one of the fluids comprises a compound having a zero dipole moment (cf. col. 6, ln. 49-55 and the description of the originally filed application pg. 4, ln. 30-34).

3.2 For reasons of completeness it is noted that documents D2, D3 and D4 disclose similar compositions (cf. related passages from International Search Report).

4 DEPENDENT CLAIMS 2-15

Dependent claims 2-15 do not contain any features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT in respect of novelty and/or inventive step (Article 33(2) and (3) PCT).

Claims 2-5, 11-15 are anticipated by the fluids of D1 or D2 or D3 or D4.

D2 (cf. pg. 2, ln. 34) discloses that one of the fluids is non-polar making it obvious for the skilled person to choose alternatives as mentioned in claims 6-10.

5 Industrial applicability is given in the field of electrowetting modules (Article 33(4) PCT).

Re Item VI

Certain documents cited

Certain published documents

Application No Patent No	Publication date (day/month/year)	Filing date (day/month/year)	Priority date (valid claim) (day/month/year)
WO03/069380	21.08.2003	24.01.2003	14.02.2002